

ABSTRACT OF THE DISCLOSURE

An ultrasonic transmitting and receiving apparatus capable of obtaining ultrasonic images with uniform image quality independently of sound ray directions. The apparatus
5 includes: an ultrasonic transducer array including plural ultrasonic transducers; a drive signal generating unit for generating drive signals for the plural ultrasonic transducers; a transmission control unit for controlling the drive signal generating unit such that transmitted ultrasonic
10 waves form a transmission beam in a sound ray direction; a reception control unit for performing reception focusing processing on plural detection signals obtained based on received ultrasonic waves to generate sound ray data representing ultrasonic information relating to the sound
15 ray direction; a storage unit for storing plural kinds of filter coefficients related to plural sound ray directions, respectively; and a filter processing unit for performing filter processing on the sound ray data by using filter coefficients related to the sound ray direction.